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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

Office Action Summary

Application No.

10/511,699

Applicant(s)

DOI ET AL.

Examiner

KIMBERLY K. MCCLELLAND

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38, 40, 42-46, 48-50 and 52-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38, 40, 42-46, 48-50 and 52-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/20/10 has been entered.

Drawings

2. In response to applicant's remarks, the objection to the drawings is withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 54 recites two different "third substrate" features. One is used as a donor substrate, while the other is a cap substrate (steps f and h). It is unclear if the same substrate is used twice as both a donor and cap layer, or if two separate substrates are recited. Clarification is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 38, 42-43, 48-50, and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. WO02/084631 as evidenced by corresponding U.S. Patent No. 6,872,635 to Hayashi et al. in view of U.S. Patent No. 5,426,342 to Nakamura et al. and U.S. Patent No. 4,034,134 to Gregorian et al.

7. As to claim 38, Hayashi et al. discloses the one-side (8) devices and the plurality of first devices (3a) and the plurality of second devices are held in the embedded state in different areas on the substrate (See Figures 1-25).

8. As to claim 42, Hayashi et al. discloses the plurality of first devices and the plurality of second devices have different characteristics (See paragraph 0170).

9. As to claim 43, Hayashi et al. discloses plurality of first devices and the plurality of second devices are held in the embedded state in different areas on the second substrate (See Figures 1-25).

10. As to claim 45, Hayashi et al. discloses one of the plurality of first devices and the plurality of second devices are any one of display devices and driving circuit devices (see paragraph 0170).

11. As to claim 47, Hayashi et al. discloses bringing the plurality of second devices into contact with a temporary adhesion layer provided on the second substrate for

temporarily adhering the other side devices to the temporary adhesion layer thereby arranging the devices on the second substrate, before embedding the plurality of second devices into the uncured adhesive layer provided on the first substrate (See Figures 1-25). However, Hayashi et al. does not disclose using pressure sensitive adhesive.

12. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

13. As to claim 48, Hayashi et al. discloses a tack of the pressure sensitive adhesive layer provided on the first substrate is greater than a tack of the temporary adhesion layer provided on the second substrate, as shown by the transfer of devices from the temporary adhesion layer to the adhesive layer (See Figures 1-25). However, Hayashi et al. does not disclose using pressure sensitive adhesive.

14. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The

motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

15. As to claim 49, Hayashi et al. discloses tack of at least one of the uncured adhesive layer and the temporary adhesion layer is changed so that the tack of the uncured adhesive layer will be greater than the tack of the temporary adhesion layer (i.e. thermally cure; See paragraph 0187). However, Hayashi et al. does not disclose using pressure sensitive adhesive.

16. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

17. As to claim 50, Hayashi et al. discloses curing the uncured adhesive layer using a heating treatment (i.e. thermosetting; See paragraph 0187). However, Hayashi et al. does not disclose using pressure sensitive adhesive.

18. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The

motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

19. With respect to claim 52, Hayashi et al. discloses (a) arranging a plurality of devices (3a) on a temporary adhesion layer (5) of a temporary holding substrate (4; See Figure 2a-2e); (b) embedding the plurality of devices (Figures 10-11) into a plurality of positions of an entirely uncured (i.e. thermosetting; column 13, lines 18-25) adhesive layer (7) provided on a transfer substrate by positioning the transfer substrate and the temporary adhesion substrate in close proximity thereof such that the temporary adhesion layer comes into contact with the adhesive layer, and the plurality of devices become entirely embedded within the adhesive layer (7) so that the plurality of devices are substantially flush with the surface of the pressure sensitive adhesive layer (Figures 10-11), (c) repeating (a) and (b) at least once with a different plurality of devices (column 33, lines 54-58), wherein for each subsequent embedding step: (ii) the different plurality of devices are embedded into different positions of the same pressure sensitive adhesive layer (See Figures 2a-2e). Hayashi does not specifically disclose the adhesive layer is pressure sensitive, or the entire adhesive layer remains uncured.

20. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The

motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

21. Gregorian et al. discloses a process for producing a laminate, including it is known in the transfer art as equivalent to cure the receptor adhesive layer either before or after the donor substrate is peeled (column 6, lines 41-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the equivalent sequence of peeling the donor substrate prior to curing, as taught by Gregorian et al. for the peeling after curing sequence taught by Hayashi et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the entire adhesive layer at once as taught by Gregorian et al. after the multiple transfer steps recited in Hayashi et al. The motivation would have been to reduce manufacturing time by performing a single curing step, instead of plural adhesive curing steps.

22. In general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. Ex parte Rubin, 128 USPQ 440 (Bd. Pat. App. 1959). It would have been obvious to one for ordinary skill in the art at the time the invention was made to transpose the transfer substrate removal prior to curing steps of Hayashi et al., such that the transfer substrate is removed before curing because the steps do not differ in function, manner, or result based on the sequence in which they are performed. Therefore, it would have been obvious to transpose the peeling and curing step disclosed by Hayashi et al., such that

a single curing step is performed after the plural transfer steps to cure the entire adhesive layer at once. The motivation would have been to perform a single curing step to cure the entire substrate at once, eliminating the time used to perform multiple individual curing steps.

23. As to claim 53, Hayashi et al. discloses (a) arranging a plurality of devices (3a) on a temporary adhesion layer (5) of a temporary holding substrate (4; See Figures 2a-2e); (b) embedding the plurality of devices (Figures 10-11) into a plurality of positions of an entirely uncured adhesive layer (7; i.e. thermosetting; column 13, lines 18-25) provided on a transfer substrate (6) by positioning the transfer substrate and the temporary adhesion substrate in close proximity thereof such that the temporary adhesion layer comes into contact with the adhesive layer (7), and the plurality of devices become entirely embedded within the adhesive layer so that the plurality of devices are substantially flush with the surface of the adhesive layer (Figures 10-11), and the devices are light emitting diodes (column 33, lines 54-58), (c) stripping the devices from the temporary holding substrate while the entire adhesive layer remains in an uncured state thereby holding the devices in an embedded and uncured state within the adhesive layer, (d) repeating (a) to (c) at least once with a different plurality of devices (column 33, lines 54-58), wherein for each subsequent embedding and stripping step: (ii) the different plurality of devices are embedded into different positions of the same adhesive layer (7); (e) hardening the adhesive layer to cure the adhesive layer (column 13, lines 18-25); (f) forming first electric wirings (46) on the adhesive layer (Figure 11), adhering a third substrate (47) onto a side on which the first electric wirings

are formed (Figure 12) of the adhesive layer (7/45), and stripping the transfer substrate (43) and the adhesive layer from each other; and (g) providing the adhesive layer with openings reaching the devices, filling the openings with a conductive material (49), and forming second electric wirings on the adhesive layer (63/64; See Figures 1-25).

Hayashi does not specifically disclose the adhesive layer is pressure sensitive, or peeling the temporary holding substrate while the entire pressure sensitive adhesive layer remains in an uncured state

24. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

25. Gregorian et al. discloses a process for producing a laminate, including it is known in the transfer art as equivalent to cure the receptor adhesive layer either before or after the donor substrate is peeled (column 6, lines 41-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the equivalent sequence of peeling the donor substrate prior to curing, as taught by Gregorian et al. for the peeling after curing sequence taught by Hayashi et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the entire adhesive layer at once as taught by Gregorian et al. after

the multiple transfer steps recited in Hayashi et al. The motivation would have been to reduce manufacturing time by performing a single curing step, instead of plural adhesive curing steps.

26. In general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 440 (Bd. Pat. App. 1959). It would have been obvious to one of ordinary skill in the art at the time the invention was made to transpose the transfer substrate removal prior to curing steps of Hayashi et al., such that the transfer substrate is removed before curing because the steps do not differ in function, manner, or result based on the sequence in which they are performed. Therefore, it would have been obvious to transpose the peeling and curing step disclosed by Hayashi et al., such that a single curing step is performed after the plural transfer steps to cure the entire adhesive layer at once. The motivation would have been to perform a single curing step to cure the entire substrate at once, eliminating the time used to perform multiple individual curing steps.

27. As to claim 54, Hayashi et al. discloses (a) forming a first temporary adhesion layer (5) on a surface of a first substrate (4), and arranging a plurality of first devices (3a) on the first temporary adhesion layer (See Figures 2a-2e); (b) embedding the plurality of first devices into an adhesive layer (7; i.e. thermosetting; column 13, lines 18-25) provided on a second substrate (6) by positioning the first and second substrates in close proximity thereof such that the temporary adhesion layer comes into contact with

the adhesive layer and the plurality of first devices are entirely embedded within the adhesive layer such that the plurality of second devices become substantially flush with the surface of the adhesive layer (See Figures 10-11), the entire adhesive layer being in an uncured state (i.e. thermosetting; column 13, lines 18-25); (c) stripping the plurality of first devices (3a) from the first substrate thereby holding the plurality of first devices in an embedded state within the adhesive layer (See Figures 2a-2e); (d) forming a second temporary adhesion layer (i.e. repeated transfer step; 4; column 33, lines 54-58) on a surface of a third substrate (i.e. repeated transfer step; 5; column 33, lines 54-58), and arranging a plurality of second devices on the second temporary adhesion layer (3a; i.e. repeated transfer step; column 33, lines 54-58; (e) further embedding the plurality of second devices arranged on the third substrate into the adhesive layer by positioning the third and second substrates in close proximity thereof such that the plurality of second devices arranged on the third substrate penetrate the surface of the adhesive layer (Figures 10-11); (f) stripping the plurality of second devices from the third substrate thereby holding the plurality of second devices in an embedded and uncured state within the adhesive layer, where the plurality of first devices are embedded in the adhesive layer (i.e. repeated transfer step; column 33, lines 54-58); (g) hardening the pressure sensitive adhesive layer to cure the adhesive layer where the plurality of first devices and the plurality of second devices are held in an embedded and cured state within the adhesive layer (column 13, lines 18-25); (h) forming first electric wirings (46) on the adhesive layer, adhering a third substrate (47) onto the side on which the first electric wirings are formed of the layer, and stripping the second substrate (43) and the

adhesive layer from each other; and (i) providing the adhesive layer with openings reaching the plurality of first devices or the plurality of second devices, filling the openings with a conductive material (49), and forming second electric wirings (63/64) on the adhesive layer, wherein the first devices and second devices are light emitting diodes (column 33, lines 54-58; See Figures 1-25). Hayashi does not specifically disclose the adhesive layer is pressure sensitive, or peeling the temporary holding substrate while the entire pressure sensitive adhesive layer remains in an uncured state.

28. Nakamura et al. discloses a method of manufacturing a fluorescent display device, including using a heat sensitive and pressure sensitive adhesive layer (column 4, lines 45-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pressure sensitive adhesive, taught by Nakamura et al., with the element transfer method disclosed by Hayashi et al. The motivation would have been to use an adhesive with good volatility and satisfactory adhesion (Nakamura et al., column 4, lines 45-53).

29. Gregorian et al. discloses a process for producing a laminate, including it is known in the transfer art as equivalent to cure the receptor adhesive layer either before or after the donor substrate is peeled (column 6, lines 41-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the equivalent sequence of peeling the donor substrate prior to curing, as taught by Gregorian et al. for the peeling after curing sequence taught by Hayashi et al. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to cure the entire adhesive layer at once as taught by Gregorian et al. after the multiple transfer steps recited in Hayashi et al. The motivation would have been to reduce manufacturing time by performing a single curing step, instead of plural adhesive curing steps.

30. In general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. Ex parte Rubin, 128 USPQ 440 (Bd. Pat. App. 1959). It would have been obvious to one of ordinary skill in the art at the time the invention was made to transpose the transfer substrate removal prior to curing steps of Hayashi et al., such that the transfer substrate is removed before curing because the steps do not differ in function, manner, or result based on the sequence in which they are performed. Therefore, it would have been obvious to transpose the peeling and curing step disclosed by Hayashi et al., such that a single curing step is performed after the plural transfer steps to cure the entire adhesive layer at once. The motivation would have been to perform a single curing step to cure the entire substrate at once, eliminating the time used to perform multiple individual curing steps.

31. Claims 40 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. WO02/084631 as evidenced by corresponding U.S. Patent No. 6,872,635 to Hayashi et al. in view of U.S. Patent No. 5,426,342 to Nakamura et al. and U.S. Patent No. 4,034,134 to Gregorian et al. as applied to claims 38, 42-43, 48-50,

and 52-54 above, and further in view of U.S. Patent Application Publication No. 2003/0227253 to Seo et al.

32. With respect to claim 40, Hayashi et al. discloses an element transfer method, including using light emitting devices as elements (See paragraph 0170). Nakamura et al. discloses the use of a pressure and heat sensitive adhesive to adhere the elements to a substrate. However, Hayashi et al. and Nakamura et al. do not disclose driving methods.

33. Seo et al. discloses display is carried out through simple matrix driving by impressing a voltage on the devices through the first electric wirings and the second electric wirings (See paragraph 0016). It would have been obvious to one of ordinary skill in the art to combine the driving method of Seo et al. with the element transfer method, disclosed by Hayashi et al. and the pressure sensitive adhesive taught by Nakamura et al. The motivation would have been to cause electroluminescence (Seo et al., See paragraph 0051).

34. As to claim 44, Hayashi et al. discloses an element transfer method, including using light emitting devices as elements (See paragraph 0170). Nakamura et al. discloses the use of a pressure and heat sensitive adhesive to adhere the elements to a substrate. However, Hayashi et al. and Nakamura et al. do not disclose driving methods.

35. Seo et al. discloses display is carried out through simple matrix driving by impressing a voltage on the devices through the first electric wirings and the second electric wirings (See paragraph 0016). It would have been obvious to one of ordinary

skill in the art to combine the driving method of Seo et al. with the element transfer method, disclosed by Hayashi et al. and the pressure sensitive adhesive taught by Nakamura et al. The motivation would have been to cause electroluminescence (Seo et al., See paragraph 0051).

36. As to claim 46, Hayashi et al. discloses an element transfer method, including using light emitting devices as elements (See paragraph 0170). Nakamura et al. discloses the use of a pressure and heat sensitive adhesive to adhere the elements to a substrate. However, Hayashi et al. and Nakamura et al. do not disclose driving methods.

37. Seo et al. discloses display is carried out through active matrix driving by impressing a voltage on the display devices by the driving circuit devices. (See paragraph 0016). It would have been obvious to one of ordinary skill in the art to combine the driving method of Seo et al. with the element transfer method, disclosed by Hayashi et al. and the pressure sensitive adhesive taught by Nakamura et al. The motivation would have been to allow for drive at a low voltage (Seo et al., See paragraph 0052).

Double Patenting

38. In light of the current amendment, the double patenting rejection has been withdrawn.

Response to Arguments

39. Applicant's arguments with respect to claims 38, 40, 42-46, 48-50, and 52-54 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's remaining pertinent arguments are addressed below:

40. As to applicant's arguments that Figure 2D of Hayashi does not disclose an adhesive layer contacting a temporary adhesion layer, or devices that are entirely embedded, this argument is not persuasive. Applicant is reminded a prior art reference must be considered in its entirety, i.e., as a whole. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Applicant only addressed the embodiment of Figure 2D in Hayashi, without addressing Figures 1-25 as cited by the examiner, including a disclosure of embedded devices (Figures 10-11).

41. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

42. Furthermore, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 440 (Bd. Pat. App. 1959). It would have been obvious to one for ordinary skill in the art at the time the invention was made to transpose the transfer

substrate removal prior to curing steps of Hayashi et al., such that the transfer substrate is removed before curing because the steps do not differ in function, manner, or result based on the sequence in which they are performed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY K. MCCLELLAND whose telephone number is (571)272-2372. The examiner can normally be reached on 8:00 a.m.-5 p.m. Mon-Thr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip C. Tucker can be reached on (571)272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:
10/511,699
Art Unit: 1791

Page 18

/K. K. M./
Examiner, Art Unit 1791

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